



NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 3 -- No. 12

Thursday, August 24, 1972

New safety record set as Y-12 beats its own performance

The Oak Ridge Y-12 Plant continues to break its own record for safety on the job! As of Friday, August 18, the plant had operated 303 days or 11,090,000 man-hours without a lost-time injury. The previous record was set 12 years ago when the plant operated 10,307,137 man-hours without a disabling injury.

The present string of accident-free days began October 19 last year and continues, already exceeding the 11 million man-hour mark.

Honors presented

The Atomic Energy Commission honored the Nuclear Division yesterday for its safety performance on the job at a special luncheon in Oak Ridge. All three of the Oak Ridge plants were praised for their safety performances, with particular emphasis on the complex Y-12 operation. Roger F. Hibbs, President of the Nuclear Division, presented the awards for outstanding safety achievements from the corporation; Paul R. Vanstrum, Vice President, gave the plants awards of merit from the National Safety Council; and Robert J. Hart, Manager of the Oak Ridge Operations of the AEC, made a presentation of the Commission's awards of merit, the highest accolades they give.

The diversity of the type of work done in Y-12, the intricate machinery and the handling of exotic materials, often at high-temperatures make a safe working operation an even more elusive goal.

This record, it is believed, is among the best in any industry of any nature anywhere.

56th safe period

Since 1948, Y-12 has operated 55 periods without a lost-time accident... five for more than five million man-hours, and two in excess of 10 million man-hours, and now is in the 56th period.

Jack M. Case, Superintendent of the Y-12 Plant, last week expressed confidence that the record could go on accomplishing new heights daily. "Safety is a way of life in Y-12. If it's not safe, we don't do it. This record belongs to every employee in the plant. It is high awareness that makes such a thing possible. Without this effort from everyone of us, Y-12 could never boast such a fine record."

183 million hours

The 56th safe period in Y-12's history has already been authenticated as officially surpassing the old 1960 record. (A 20-day waiting period has past, which determined that no injury developed into one of a more serious nature.)

The 56 periods, including the present record-breaking one, account for more than 183 million man-hours of safe operations since Union Carbide began operations in Y-12 more than 25 years ago!

QUESTION BOX

If you have a question on company benefits, policies, etc., just drop it in the mail to the Editor, Nuclear Division News. (Or telephone it in to your plant news representative... see page two.) You may or may not sign your name. We will not use your name in the paper.

Questions are referred to the proper authority for as accurate and honest an answer as possible. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

QUESTION: Why doesn't Carbide consider group auto insurance for its employees, since the only available transportation to work is the private automobile? I understand that considerable savings can be obtained through group auto insurance due to lower costs of handling and a better risk group. Most of us spend more for auto insurance than we would for the medical insurance if it were not provided by Union Carbide. We do not get an income tax deduction for this necessary (to get to work) auto insurance, but Carbide could deduct its cost in such a program.

ANSWER: There are many things that the Company might do for its employees on either a group or a cooperative basis, but each one of these pulls the Company deeper and deeper into the personal lives and affairs of its employees.

Group automobile insurance falls in this category. The few companies who have cooperative plans have found this to be true. Many employees are extremely unhappy because their company won't use its influence to get the insurance companies to pay claims to the satisfaction of the employee. Many of these claims are controversial and subject to litigation.

While lower premiums might be offered in the beginning to such a group, over the long pull each group will have to provide enough premiums to cover the cost of accidents, administrative costs, state premium taxes if any, and profit.

The Company believes that automobile insurance is something that each employee should buy for himself from the insurance company of his choice.

(Continued to page 3)



ORNL BIOLOGISTS ANNOUNCE BREAKTHROUGH -- The dark-coated baby mouse near its white foster mother was developed from an embryo that was deep frozen, thawed, then implanted in the white mouse.

Biologists successfully freeze, thaw, then implant mouse embryo in new mother

ORNL biologists announced last week the successful preservation of mouse embryos through deep freezing techniques. Peter A. Mazur and Stanley P. Leibo, along with Cambridge University visiting scientist, David G. Whittingham, reported their success at freezing fertilized mouse embryos and after thawing, transplanting them into foster mothers who carried the embryos until birth.

The science is called cryobiology. Prior to 1971, attempts to freeze mammalian embryos were unsuccessful. Last year, Whittingham reported successful freezing of certain stages of early mouse embryos. However, none of the embryos survived longer than 30 minutes.

Following Whittingham's success, cryobiologists in ORNL's Biology Division decided to collaborate with Whittingham to explore the cryobiological factors which might affect the ability of embryos to survive freezing.

For his early experiments Whittingham used a suspending solution of polyvinylpyrrolidone (PVP). In the ORNL experiments using PVP, the embryos were not able to survive freezing.

Mazur and Leibo decided to try another suspending solution, dimethyl sulfoxide (DMSO), and to vary the freezing and thawing rates. Some 3000 frozen thawed embryos were used in the experiment. Over 50 percent of one-, two-, or eight-cell embryos survived freezing to -80°, -196° and 269° for up to eight days when slow cooling (0.4 to 2° /minute) and slow warming (4 or 25° /minute) were used.

About 1000 frozen-thawed embryos were transferred to foster mothers. About 2/3 of the recipients became pregnant and, in these, 43 percent of the embryos developed into mature living fetuses or living mice. Some pregnancies were terminated to determine how many fetuses had been implanted in the foster mother but had not then developed further. Mazur said they were quite pleased with these percentages, which are comparable with those of transplanted fetuses that haven't been frozen.

The freezing of mouse tissue and successful completion of gestation and birth raise hopes for many other applications of cryobiological techniques. One would be the improvement of livestock throughout the world. For example, embryos from prize cattle could be shipped to developing areas of the world for implantation in local cattle. Local livestock would be suitable for foster mothers if healthy enough to raise calves through pregnancy.

Preserve strain

Another possible application is the long-term storage of embryos of mouse (Continued to page 6)

NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through August 17:

ORGDP	22 Days	336,000 Man-Hours
ORNL	49 Days	832,887 Man-Hours
Paducah	148 Days	900,000 Man-Hours
Y-12	303 Days	11,090,000 Man-Hours

Safety is everyone's concern!

Carbide Scholar 'rides herd' on bill in congress workshop

(Editor's Note: Mikle D. Ledgerwood, son of Jay L. Ledgerwood in Y-12's Dimensional Inspection Department, recently attended a Washington Congressional Workshop as a Carbide Scholar. Following are some of Ledgerwood's impressions of his week-long stay in the nation's capitol.)

by Mikle D. Ledgerwood

The majority floor manager of the House of Representatives, Donald K. Anderson, stood up and said, "Is there any opposition to the proposal that this bill be passed by acclamation?" The refusal of anyone to record a negative vote meant that the bill to establish a national system of bicycle trails and youth hostels had passed. This simple act marked the end of a very exciting and exacting week in the Washington Workshops Congressional Seminar.

But to understand how this act had come to pass, it is necessary to understand what had happened in the week which had culminated with the bill's passage.

I arrived at the campus of Mount Vernon Junior College (for girls during the academic year) in the afternoon just in time for the good old cafeteria supper. Then, after the usual time of getting to meet people, the 114 kids from 30 different states and three foreign countries, gathered together to hear a pep talk by Leo S. Tonkin, the workshops originator.

Workshop origin

"Some of you people, I am certain, are wondering why I started this workshop to begin with. As you know, I am in a position that requires my presence on Capitol Hill a good deal of the time, and I saw students merely wandering through the Capitol, and I thought high schoolers should be given the opportunity to understand what happens in Washington's governmental processes, and Washington itself, rather than just understanding a motel room and a swimming pool; so I originated this seminar which would give students a chance to look deeper into the people that influence our national government, and one new thing that we are trying is the 'Sense of the Seminar.' It is a body that is like the Senate when the Senate is doing a 'Sense of the Senate' resolution which only expresses a feeling, not a binding force... We hope that after the resolutions you pass are printed in the Congressional Record, some politi-

cian will take your ideas and put them in a bill with binding force."

In the next few days, we listened attentively as they answered our questions on the seniority system, home rule for the District of Columbia, Vietnam, and drugs; but one question we asked very often was did the individual speaking have any ideas for new bills in the future? During the week we listened to quite a few prominent politicians, including Sen. William E. Brock III (R, Tenn.), Rep. Gerald R. Ford (R, Mich.), Rep. Robert F. Drinan (D, Mass.), Sen. Barry Goldwater (R, Ariz.), Sen. John V. Tunney (D, Calif.), Sen. Ted Stevens (R, Alaska), singer Johnny Cash (on prison reform), the ambassador from Kenya, representatives of the Central Intelligence Agency, and the National Security Council, and Rep. Louis Stokes (D, Ohio), Chairman of the Black Caucus. But it was not until Wednesday — the same day a small group of us accidentally bumped into the Watermelon Queen of the USA! — that we finally got an idea for a resolution. Sen. Hubert Humphrey (D, Minn.), spoke to us that day, and he mentioned the construction of a national system of bike trails as a way to manufacture employment for youth much as in the way of the Civilian Conservation Corps of the 1930's. Then I decided that I wanted to see a bill using that idea passed in our "Sense of the Seminar."

Bill-writing experience

Thursday, the first step occurred. We divided into seven different committees to write the bills. I decided to join the Interior and Insular Affairs Committee and then, surprisingly, with the help of a friend from New York, I was elected chairman! The committee then decided to give me the task of doing the preliminary draft of the bike bill. Then after that was done, we revised it; and I rewrote it again.



RETURN OF THE SCHOLAR — Mikle D. Ledgerwood, son of Y-12's Jay L. Ledgerwood, recently returned from Washington, D.C. where he attended a workshop as a Union Carbide Scholar. Roger F. Hibbs, Division President, presents Ledgerwood with a "scholar" plaque.

It came out proposing to establish a national network of bicycle trails to be built upon abandoned railroad beds and to build a system of youth hostels and campsites in close proximity to the trails, using youth labor to staff them whenever possible. Our committee's other bill (each committee was allowed to send out two bills), written by a person from Pennsylvania and me, was also interesting. It proposed to eliminate the Bureau of Indian Affairs, and replace it with a cabinet level office which would be manned completely by Indians chosen by tribal councils and supervised by a presidential appointee. And, while all this work was going on, I also had time to go to Mount Vernon, Arlington Cemetery, and Ford's Theater, while being an ambassador for Oak Ridge. I was busy explaining Oak Ridge to people who had not heard of it and what a wonderful place it is; that we now do nuclear research for peaceful purposes and to the

people who have heard of Oak Ridge that it is not "Bomb City USA."

"Youth are interested"

But finally it was time for the Seminar. Both of the Interior and Insular Affairs Committee's resolutions passed and a few more which surprised me by their content. One stated that there had to be an internationally approved cease fire in Vietnam and the return of prisoners of war before the U.S. could pull out! (A policy more conservative than President Nixon's.) Other resolutions were on the aged, prison reform, busing, China, abolishment of the electoral college, and home rule for D.C.

Perhaps this indicates that youth are interested in many things besides themselves. But anyway the next day was time to say goodbye to 114 great friends, Washington, D.C., and to say thanks to Union Carbide for making the whole trip possible.

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EARTH SCIENCES — Stafford Brown Jr., and Gwendlyn Muse are employed in ORNL's Environmental Sciences Division at Oak Ridge National Laboratory. Miss Muse is from Greensburg, and Brown is from Beuche, both in Louisiana. They will begin studies at Southern University this fall.

ORNLers' paper brings Nuclear society kudos

Ken Farrell and Roy King are winners. The Honors and Awards Committee of the Material Science and Technology Division of the American Nuclear Society selected their paper "Radiation-Induced Strengthening and Intergranular Fracture in Aluminum" as the best unsolicited paper in the MSTD at the recent Las Vegas meeting. A year's free membership for both is the prize. Both Farrell and King are in the Metals and Ceramics Division at ORNL.

Patents Received

To Ed D. Hudson, ORNL, for "Magnetically Self-Shaping Septum for Beam Deflection."

To John J. Pinajian, Arthur F. Rupp and Stanley J. Rimshaw, ORNL, for the "Production of High-Purity Cesium-137."

To George S. Petit and Ralph R. Wright, ORGDP, for "Electrolytic Process for Cleaning High-Carbon Steels."

ORNL names Sidney Siegel deputy associate director

Sidney Siegel has joined the Oak Ridge National Laboratory as Deputy Associate Director for Biomedical and Environmental Sciences. He is a former vice president of Atomics International, a California-based division of North American Rockwell.

In his new position, Siegel will be chiefly responsible for Laboratory Management overview of the ORNL research that is funded by the National Science Foundation's "Research Applied to National Needs" program, and also for AEC regulatory work conducted at ORNL on preparation of environmental impact statements related to many of the nation's proposed nuclear power plants.

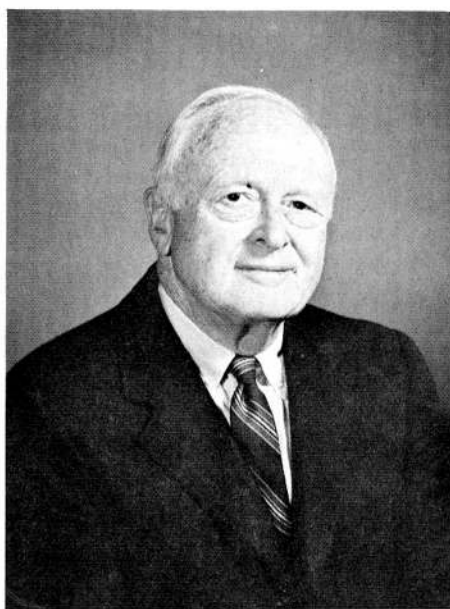
Siegel, a physicist, spent about two-and-one-half years at ORNL during the late 1940s while on leave from the Westinghouse Electric Corp. During that time he initiated a continuing research program on the effects of radiation on solids.

In 1950, Siegel joined Atomics International where he served in various capacities including vice president and technical director.

Although his work for many years has centered on sodium-cooled nuclear reactors, including the Liquid Metal Fast Breeder, Siegel has had a growing interest in environmental affairs, especially with regard to effects of large-scale energy production. He was a frequent consultant to the ORNL-NSF Environmental Program from its inception two years ago.

Siegel is a past-president and charter member of the American Nuclear Society. He is a Fellow of both the ANS and of the American Physical Society.

Siegel and his wife, Lilyan, have moved into their new home at 108 Westwind Drive, Oak Ridge.



Sidney Siegel

Earth's forests topic for ORNL workshop

More than 50 ecologists from 18 countries will share information on the world's forests from a unique workshop being held at Oak Ridge National Laboratory.

As a part of the International Biological Program, a joint ecological effort by 57 countries, the scientists have brought global data to be fed into the computer systems at Oak Ridge. The purpose is to develop preliminary mathematical models of the earth's forests for future study. The United States is a major participant in the International Biological Program and Oak Ridge National Laboratory plays a key role as the directing institute for the analyses covering the Eastern United States.

Scientists from Europe, Asia, and Australia have brought data on tropical, subtropical, evergreen and deciduous forests. Working with the staff of the Environmental Sciences Division they propose to construct first order simulation models of the functioning of these systems.

The "International Woodlands Workshop on Ecosystem Analysis" is the first of its kind. Objectives of the Workshop are to initiate data summaries for primary production and mineral cycling in forest ecosystems, and the application of systems analyses techniques for modeling dynamic behavior. Special work groups are concentrating on interpretation and comparison of ecosystem data on a global scale. Attendees will visit the Ocoee Gorge near Copper Hill, Tenn., the Co-weeta Hydrologic Laboratory at Franklin, N.C., and the Great Smoky Mountains National Park.

Participants are from Sweden, Canada, Malaysia, Belgium, the Netherlands, the USSR, Germany, Finland, Czechoslovakia, India, Poland, France, the Congo, New Zealand, Japan, Australia, the United Kingdom, and Italy as well as the United States.

The Nuclear Division News is addressed from printing plates in the plant mail room. No computer is used.

We checked your address in the computer and found that it includes your name with initials, the rural route number, box number, and the city, state, and ZIP code. This information should move your check stub through the mails and directly to your rural route mail box. Since your mail is going astray, it would appear that the problem could be with sorting methods used by the mail system. You may want to discuss this with your local postmaster.

New supervisors, analyst named in ORNL, ORGDP promotions

Three recent promotions are announced at the Oak Ridge Gaseous Diffusion Plant. Beulah M. Williams has been named a key punch supervisor in Computing Technology Center; Edna Ruth Cary has been promoted to a production scheduling analyst in Operations Planning; and James G. Brown is made an instrument supervisor in Field Maintenance.

Miss Cary, a native of Wise County, Va., came with Union Carbide in 1944. She is a graduate of Appalachia High School and has done evening work at UT. She makes her home at 641 Pennsylvania Avenue, Oak Ridge.

Beulah M. Williams

Beulah Williams was born in Osaka, Va., and worked with the Campbell County (Tenn.) Board of Education, was a teacher, and an usher captain at the RKO Palace Theater in New York City before coming with Union Carbide. She worked at Y-12 for Tennessee Eastman also.

She graduated from Jacksboro High School and also from the Manhattan Business Institute, New York.

Mrs. Williams lives at 304 East Prospect Street, LaFollette, with her husband Mack. They have three married daughters, Maria Powers, Margetta Cox and Rebecca Claiborne. They also have two sons, Mack a senior at LaFollette High School and David in the fifth grade.

James G. Brown

James G. Brown, a native of Knoxville, attended Austin High School there, and spent almost two years at Knoxville College, in pre-engineering studies.



Brown
Yount Road, Knoxville.

He served in the Army as a communications crewman and flight dispatcher, before coming with Union Carbide eight years ago.

Mrs. Brown is the former Mary Elizabeth McSwain, Jefferson City. They live at Route 18,

W. J. Wilcox keynotes chemical society meet

William J. Wilcox, Technical Director for the Nuclear Division, was the keynote speaker for a two-day program on "Operation Interface," held recently in Knoxville.



Wilcox

The program, sponsored by the East Tennessee Section of the American Chemical Society, was designed to foster interaction between academic and industrial chemists. The program dealt with such subjects as employment prospects in industry, industrial and academic responses to environmental concerns, curriculum trends and needs of chemists for continuing education. Program chairman was C.W. Keenan, of the chemistry department, University of Tennessee.

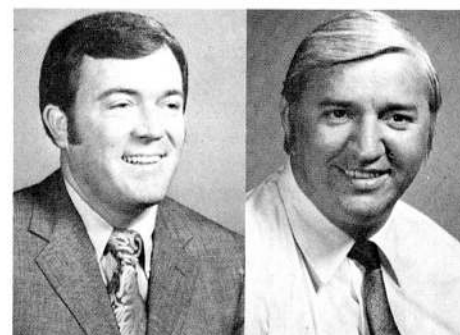
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Miss Carey

Mrs. Williams



Reeves

Tidwell

Two ORNL men have been promoted to foreman in the Plant and Equipment Division. Larry D. Reeves was appointed a foreman in the Field, Transportation and Support Services Department, and Bobbie L. Tidwell was appointed a foreman in the Materials Department.

Reeves came to ORNL in 1967 as a rigger-iron worker. Prior to joining ORNL he served in the Army and completed the iron workers apprenticeship program. He then worked in construction for five years.

Reeves and his wife Doris live in Knoxville with their two children, Jason and Justin.

Tidwell came to ORNL in 1957. He was a requisitioner in the Materials Department before his promotion. Before coming to ORNL he worked for Mead Corporation and attended Carson Newman College and The University of Tennessee.

Tidwell and his wife Barbara live in Harriman with their three children, Debbie, Tony and Robin.

Union Carbide sales seen as new record

Union Carbide Corporation's sales in the second quarter amounted to \$810.1 million, and net income was \$35.9 million, or 89 cents a share. Sales set a new record for any quarter, and compare with a \$770.9 million for the second quarter of 1971 and \$759.6 million for the first quarter of this year. Sales were up five percent and net income was 33 percent over the corresponding period of 1971.

Net income for the quarter before extraordinary items was \$52.0 million, or 86 cents a share. Extraordinary items totaled \$1.9 million, or three cents a share. The extraordinary items were made up of gains of the sale of a plastic container business and the sale of an interest in an affiliated international company. Net income in the second quarter of 1971 was \$40.5 million, or 67 cents a share, and net income in the first quarter of 1972 was \$51.1 million, or 84 cents a share. The first-quarter figure included an extraordinary item of \$1.0 million, or two cents a share.

QUESTION BOX

QUESTION: I am asking why it is that the stub from my paycheck can not be addressed the same as the Nuclear Division News by using my first name, middle initial, and last name rather than by two initials and last name only. My last check stub was sent to at least two other men with the same name as mine before it finally got to me.

The Paymaster's Office said that there was a limitation on the number of letters that the Post Office could accept in a name, but this does not apply in my case because I get mail addressed using my full name.

ANSWER: Because of the magnitude and complexity of the job, each employee's pay check is calculated and printed by computer. The number of memory storage cells in the computer is limited. With a very high demand for the cells that are available, it is necessary to conserve them whenever possible. For this reason only two units of storage capacity are used in the name section to store the employee's initials. Each employee's mailing address includes his street, or rural route number, city, state and ZIP code. These are printed on the check stub by the computer at the time the check is prepared if the check is to be mailed to the employee or to his bank.



OPENING GUNS -- Riders in the Epsilon Sigma Alpha Million Dollar Bike Ride begin their trek which netted them \$2,379.45 for the St. Jude Children's Research Hospital in Memphis. Paducah Plant's Inez Stiner, center, couldn't ride a bicycle, so she sits on a specially built tricycle. She raised \$67.50 for the drive!

Bike ride at Paducah raises money for St. Jude Hospital

On a sunny and humid day this summer cyclists in Paducah turned out at Paducah Tilghman High School's hard surface track to ride bicycles for a cause. Their cause was to raise money for St. Jude Children's Research Hospital in Memphis as part of the nationwide Epsilon Sigma Alpha Million Dollar Bike Ride.

Many participate

Several Paducah Plant employees, all members of the sponsoring organization, were instrumental in raising \$2,379.45. Velva Blayney, Plant Engineering, was chairman; Martha Cates and Lee Floyd,

Industrial Relations; Lorraine Ross, Finance and Materials; Betty Lester, Plant Superintendent's office; and Inez Stiner, Laboratory Division, served on committees.



Mrs. Blayney

Miss Stiner proved the something extra that sparked enthusiastic participation among her fellow workers — but not riding a bicycle. She had never learned to ride a bicycle, but wanting to do her share, was attempting to enlist a co-worker to ride and she would be sponsor. Her fellow workers conferred and concluded that lack of ability to maneuver a bicycle was no excuse to sit on the sidelines looking on. They took a child's tricycle, welded a steel rod into the steering mechanism to raise the handlebars, then proceeded to teach Miss Stiner to ride that vehicle.

(Developers of the machine unanimously agreed not to seek a patent on the vehicle, according to inside sources.)

Co-workers 'help'

A cartoon was prepared and posted asking Lab employees to support Inez and her tricycle. An appropriate costume was assembled consisting of yellow raincoat, goggles, hot pants, and hard hat. Against the bright blue track, she was a colorful sight; so much so that she was featured in the 6 p.m. TV coverage of the ride and in the Sunday edition of the daily newspaper.

Negotiating with her sponsors for \$1 a mile, Miss Stiner raised \$67.50. To do this she peddled one and one-fourth miles. Other Paducah Plant employees participating in the ride other than those already mentioned were Mary Parish, Sandy Watson, John Floyd, and Max Sacharnoski.

Epsilon Sigma Alpha is a woman's organization whose purpose is philanthropic, educational, and social. They took on the project of a coast-to-coast bike ride to raise \$1 million for St. Jude's.

"To sin by silence when they should protest makes cowards of men."

.....Abraham Lincoln



OFFICIAL DRESS -- Inez Stiner, Paducah's Laboratory Division, models the official clothes fellow workers presented her for the Million Dollar Bike Ride.

Foreign travel planned by ORNL staff members

Several ORNL staff members will be speaking at foreign meetings during the next few weeks.

Attending the Ninth International Congress of Crystallography in Kyoto, Japan, August 26-September 7 will be William R. Busing, Chemistry Division, and Chin Jsuan Wei, Biology Division. Busing will speak on "A Computer Program to Aid in the Understanding of Interatomic Forces in Molecules and Crystals," and will serve as a delegate of the National Assembly of the Congress. In addition to attending the Congress, Chin will confer with colleagues at the Institute for Protein Research in Osaka, Kyushu University and National Taiwan University.

Russell D. Baybarz of Chemical Technology Division will speak on "The Microchemistry of Californium and Einsteinium" at the Symposium on the Chemistry of Transuranium Elements in Moscow, USSR, September 4-8.

Barbara A. Hamkalo of Biology Division is an invited discussion leader at the NATO-EMBO summer School on Supramolecular Biology at Spetsai, Greece, August 16-29.

John R. Hogan of Thermonuclear Division will present "Tokamak Two-Fluid Code: Effects of Neutral Beam Heating, Radiation Loss, and Charge Exchange" at the Fifth European Conference on Controlled Fusion and Plasma Physics at Grenoble, France, August 21-25. He will present "Oak Ridge Tokamak Codes" at a specialist's meeting on Tokamak Simulation Codes at Fontenay-Aux-Roses, France, August 29-30.

Yugoslavia, Germany, Romania

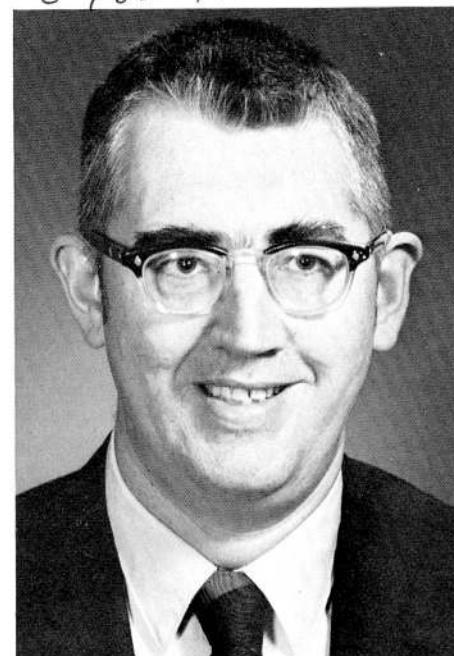
James S. Eldridge of Analytical Chemistry Division will present "Nondestructive Determination on Radionuclides in Lunar Samples Using a Large Low Background Gamma-Ray Spectrometer and a Novel Application of Least-Squares Fitting" at the First International Summer School on Radionuclides Metrology at Herceg Novi, Yugoslavia, August 21-September 1. The paper was coauthored by G. Davis O'Kelley, Kenneth J. Northcutt of ORNL and E. Schonfeld of NASA.

Joel A. Carter of Analytical Chemistry Division will present "Probe-Type Sample Changer for Rapid Environmental Analyses by Spark-Source Isotope Dilution Mass Spectrometry" at Heidelberg, Germany, August 28-September 1.

QUESTION BOX

QUESTION: Does the recent hike in social security benefits affect what I pay into social security?

ANSWER: When the President signed into law a 20 percent increase in Social Security benefits, he established new tax rates and wage bases beginning in 1973. This year's tax base in \$9,000... 1973's will be \$10,800 and 1974's will be \$12,000. Maximum deductions this year are \$468; they will be \$594 next year; and \$660 in 1974. During the period 1975 until 1985 there will be an automatically adjusted wage base. This year we are paying 5.2 percent of our wage base into social security... next year we begin paying 5.5 percent.



CHAIRS CONFERENCE -- J.B. McGrory, ORNL Physics Division, chaired the 1972 Gordon Conference on Nuclear Structure Physics held recently in Tilton, N.H. J.L.C. Ford of the division presented "Nuclear Hexadecapole Moments" at the conference.

Carbide and Chemico ink mutual agreement

Union Carbide Corporation and Chemical Construction Corporation (Chemico) have signed an agreement licensing Chemico to use technology developed by Union Carbide for the design and construction of coal gasification plants. Chemico is a Boise Cascade subsidiary.

The technology involved in the license agreement covers the application of a unique, patented, agglomerating fluid-bed combustion process for gasification of coal which was developed by Union Carbide. The gasification process is attractive as the first step in the production of synthetic natural gas, or can be used to produce a clean gas for the generation of electric power.

ORNLers' daughter takes Radcliffe scholarship

Michelle N. Holloway, a junior at Oak Ridge High School, will enter Radcliffe College this fall under a special scholarship program. She will enroll without a diploma in the juniors program. A limited number of juniors displaying excellent academic achievement, maturity and discipline necessary for a large university environment and superior college entrance examination scores are admitted to Radcliffe as college freshmen.



Miss Holloway

Ranking in the top ten percent of high school students in the nation, Miss Holloway was awarded a National Education Development Certificate for Academic Excellence in 1970.

At ORHS she is a member of the National Honor Society Junior Key, Pep Club, and is active in student government, and the Youth Conference on Politics.

Miss Holloway is the daughter of George and Jacqueline Holloway, both of ORNL's Biology Division. They live at 130 Arkansas Avenue, Oak Ridge.

Nuclear Division deaths

Harley T. Bolinger, Y-12's Building Services Department, died August 12 while fishing on Norris Lake. A native of Lake City, he had been working in Y-12 since 1959. He previously worked at ORGDP also, and was employed in a service station in Lake City between his jobs here.



Surviving are his wife, Mrs. Maria Rhea Bolinger, Route 1, Lake City; sons, Wayne, Larry and Darrell; mother, Mrs. Ina Bolinger; two sisters; and three grandchildren.

Funeral services were held at the Clear Branch Baptist Church with the Revs. Robert Cross and David Hanes officiating. Interment followed in the Leach Cemetery.

James M. Bailey, a member of the Fire Department at ORGDP, died August 4 at his Oak Ridge home. A veteran of the U.S. Army, he came with Union Carbide in 1945.



Mr. Bailey

Survivors include his wife, Mrs. Carrie Arnes Bailey, 306 East Faunce Lane; two sons, Michael and James M. Jr.; daughter Deborah Lynn; three sisters; one brother; and several nieces and nephews.

Funeral services were held at Martin's Funeral Home with the Rev. James Winter officiating. Burial was in Anderson Memorial Gardens. Mr. Bailey's co-workers from D shift served as honorary attendants at the services.

Harry F. Harris, Y-12's H-2 and F-Area Shops, died August 12, from an apparent heart attack. A native of Elkhorn, W. Va., he came with Union Carbide October 15, 1953. Before coming to work in Y-12, he was employed by the Norfolk and Western Railroad.



Mr. Harris

Survivors include his wife, Mrs. Doris Burton Harris, Route 17, Briscoe Drive, Knoxville; two sons, Leon and Jerry; three daughters, Mrs. Janet Blandin, Mrs. Joe Ellen Backus and Mrs. Betty Ann McCoy.

Funeral services and burial were held from the Dudley Funeral Home, Bluefield, W. Va.

Thomas J. Davis Jr., Y-12's Process Maintenance, died August 12 in Knoxville. He was a native of Mississippi, and a graduate of the Training and Technology project in Y-12. He came with Union Carbide April 7, 1969.



Mr. Davis

Survivors include his three children, Joseph, Timothy and Tanisha; parents and grandparents, five sisters, and two brothers. His home is at 101 East Fifth Avenue, Knoxville.

Funeral services were held at Mt. Maria F.B.H. Church with the Rev. C.F. Fuqua officiating. Interment followed in Crestview Gardens.

Charles E. McKinney, ORGDP Shop Services, died July 26 in the Harriman Hospital from an apparent heart attack.



Mr. McKinney

Mr. McKinney, a native of this area, came to ORGDP August 15, 1944.

Survivors include his wife Mrs. Elsie McKinney; daughter, Mrs. Paul Randolph; two sons, Don and Randy; three stepsons, Harold, Jimmy and Jack Webster; mother, Mrs. Elizabeth McKinney; seven brothers and one sister.

Funeral services were held at the South Harriman Baptist Church with the Rev. Charles Works officiating. Interment was in Roane Memorial Gardens.

Peter P. Huffman, Y-12's Standards and Surveys, died August 15 in a Decatur, Ala., hospital where he had been confined for almost two months with a heart ailment. He was a native of Carroll County, Ga.



Mr. Huffman

Mr. Huffman came with Union Carbide January 5, 1953. Prior to that time he had worked in machining and on his own farm in Alabama.

Survivors include his wife Lillian, 642 West Outer Drive, Oak Ridge, and a daughter Mrs. George McMinn, three sisters, three brothers, and two grandsons.

Funeral services were held at the Simco Baptist Church, Cullman, Ala., with burial in the church cemetery.

Paducah's Betty Lester added to distinguished CPS listing

The Paducah Plant adds another name to the Certified Professional Secretaries list. Betty Lester, secretary to Clyde C. Hopkins, Plant Superintendent, became the fourth UCC secretary to be notified of the CPS attainment.

Mrs. Lester is a native of Illinois and a graduate of Draughton Business College, Paducah. She has been employed at the Paducah Plant for 21 years. During the plant's construction, she worked for Giffels and Vallet, Inc., architect and engineering firm.

Mrs. Lester's husband, Sid, is a salesman for Graves Electric Supply Company. They live at 402 Michigan Street, Paducah. They enjoy golf, bowling and bridge.

She is an active member of the Paducah-Kentucky Lake Chapter, NSA, and has served on several committees. She was chairman of the Secretaries Week this year.

Of the 2,445 candidates for the CPS this year, 529 passed the examination.

Mrs. Lester will be honored at the plant with a luncheon by her fellow employees, and will receive her official certificate at a dinner at the Paducah Country Club next month.

Three other Nuclear Division secretaries will also be honored in Oak Ridge ceremonies.

Will Steele, Y-12's 9215 Rolling Mill, died early August 16 in the Oak Ridge Hospital from an apparent heart attack. He had not been previously ill.



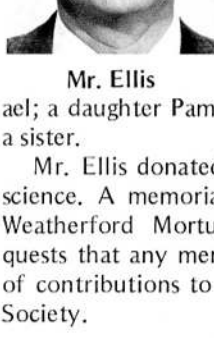
Mr. Steele

A native of Houston, Miss., Mr. Steele came to Y-12 in the early 50's. He lived at 212 South Benedict Avenue, Oak Ridge.

Survivors include four daughters, Mrs. Louis Mills, Mrs. Willie Mae Young, Mrs. Clara Payne, and Mrs. Roena Atkinson; three sons, Bobby, Jerry and Hugh; four stepsons, one sister and three brothers, and many grandchildren.

Funeral services were held at the Weatherford Funeral Home, Oak Ridge, with the Revs. Franklin Maddox and Worth Henderson officiating. Interment followed in the Oak Ridge Memorial Park.

John M. Ellis, Field Maintenance Superintendent at ORGDP, died August 5 in a Knoxville hospital.



Mr. Ellis

A native of Buffalo, N.Y., he came with Union Carbide in 1945, after serving with the Marine Corps during World War II. He was a graduate of the University of Buffalo, and had worked for DuPont there also.

Surviving are his wife Mrs. Ruby Harris Ellis; a son Michael; a daughter Pamela; two brothers and a sister.

Mr. Ellis donated his body to medical science. A memorial service was held at Weatherford Mortuary. The family requests that any memorials be in the form of contributions to the American Cancer Society.



Betty Lester

Red Cross blood means safer blood

Did you know that a blood transfusion that's given to save a life can cause a death?

There are many reputable commercial blood banks, but blood from commercial sources is, unhappily, 10 times more likely to be the cause of hepatitis than is blood from The American Red Cross.

People in the Oak Ridge area will have an opportunity soon to roll up their sleeves again and give blood to the Red Cross. The Bloodmobile will be at the Oak Ridge Armory September 6, from 4 p.m. until 10 p.m. and from noon until 6 p.m. on September 7.

So, make sure the hospital in this area gets clean blood from healthy donors. Give to the Red Cross next month. It will keep people you know alive and well.

ATTEND POSTAL CONFERENCE

James B. Lankford and Orel C. Hartman will attend the National Postal Forum, August 28, 29 and 30. The meeting will be held at the Washington Hilton, Washington, D.C. Lankford is head of the Mail Department at ORNL; and Hartman is head of Mail Services in Y-12.



A MILESTONE — Lynn Marie Hawkins, ORNL's Information Division, has completed requirements and received her certification as a medical librarian from the Medical Library Assoc., Inc. She holds a MS in Library Science from University of Kentucky and joined ORNL in October of 1971.

Foreign assignments

Three ORNL staff members have begun foreign assignments.

Rufus H. Ritchie of the Health Physics Division is on leave to act as advisor to the government of India in the field of radiation safety. He is at the Bhabha Atomic Research Centre in Bombay. He will return by way of Vienna where he will report on the work done in Bombay at IAEA headquarters.

Milton H. Lloyd of the Reactor Chemistry Division will spend approximately 18 months at the Swiss Federal Institut

of Reactor Research in Wurenlingen. He will conduct research on promising advanced fast reactor fuel materials for commercial power reactors. The Institut utilizes sol-gel technology developed at ORNL and Lloyd will continue the work of Walter Bond, also of the division, who is completing an assignment there.

Russell D. Baybarz will spend approximately one year at the Europaisches Institut for Transurane at Karlsruhe, Germany. He will collaborate with Werner Muller on actinide element chemistry.



SPORTS NOTES



ENJOYING PICNIC -- Bill Williams, D Shift Guard Department from Y-12, enjoys a family picnic with his wife and two children recently. D Shifters, as well, as A and C-Shiftmen all recently had overflow crowds at their party at the Park. Clark Center Recreation Park is available all summer for such groups.

K-25 BARBECUE - HOOTENANNY

September 30 is the magic day ORGDP folks have chosen for the annual barbecue-hootenanny get-together at the Clark Center Recreation Park. There will be plenty of food and drink for all. Tickets will go on sale for ORGDPers and their families shortly. The Recreation Department has announced that the Park will be close all day that day and the day before (September 29) because of the special event. Details will follow.

PADUCAH BOWLING

Paducah men's bowling kicks off Thursday, August 31, at Cardinal Lanes. The league currently has six teams, room for eight. Anyone interested in joining should contact Paducah Recreation at Bell extension 368.

PADUCAH GOLF

First place winners in Paducah's Mixed Scrabble (for August 5) were Elvin Kuehn, Robert Holler, E.H. (Tommy) Tomlinson, and Gil Perdue. Finishing seven under par at Paxton Park was the winning foursome. Bill Longton, Clyde Hopkins, Jerry Pursley and Mary Parrish finished second with a three under par score. Third were Arv Gorline, John Stearns, Jerry Neale and Jane Chapman.

ORNL GOLF

Fritz McDuffie, Information Division, scored a hole-in-one on number three at the Oak Ridge Country Club! Other members of the foursome included Jim Barker, George Creek and Jim Tarrant.

ALL CARBIDE RIFLE LEAGUE

ORNL's Don Kiplinger won the last match of the All Carbide High Power Rifle League with a 478 out of a possible 500. Y-12's Jack Huff was close behind with a 456, while Carl Brewster, also from Y-12, came in third with a 471.

CHANGE OF ADDRESS

Retirees from Union Carbide Corporation's Nuclear Division receive the Nuclear Division News as long as the mail rooms in the four plants have correct addresses on them. In sending in a change of address, it is helpful to indicate which plant you retired from, please.

ALL CARBIDE SOFTBALL

Carbide Softball standings through August 11:

Team	W	L
All Stars	19	0
Snakes	16	1
Buccaneers	15	4
Computes	14	4
Colts	13	4
Knights	10	6
Supersonics	12	7
The Gang	11	7
Energetics	11	7
Red Barons	11	7
Hornets	10	9
Bio-Rejects	8	8
Bombers	6	9
Losers	7	11
Playmakers	6	11
Centaurs	6	12
Raiders	6	13
Ecology	6	14
Thermos	5	13
Ridge Runners	5	13
Trojans	4	12
Underdogs	3	13
A-Wingers	0	15

Next Issue

The next issue will be dated
Sept. 15. The deadline is Sept. 5.

COMPANY SERVICE 20-25-30

Y-12 PLANT 25 YEARS

Paul C. Marine, Mable J. Stapleton, Frank J. Lambert Jr., James R. Wilmoth, Gerald R. Guinn, James L. Overton, James R. Cooter, Russell G. Lawler, Paul Y. Miller, Anna G. Dobbins, Rosa Lee Lewis, Ray P. Walker and Isaac H. Tackett Jr.

20 YEARS

James F. Ellis, Ruben A. Hubbard, Ambrose H. Ballard, Carnelon V. Terry, Dana B. Arnold, Elmer F. Brooks, Roy H. Stooksbury, Kenneth R. Haeusler, Tommy E. Verner, John M. Napier, Acie L. Rainwater, Aurtha W. Mastin, Emanuel G. Laggis, Carl G. McCulley, Dean A. Ford, Hugh F. Henderson, Vernon C. Hemperly and Fred W. Walker.

PADUCAH 20 YEARS

Woodrow W. Davis, Adrian K. Freels, Rodney A. Miller, Harold L. Howell, Richard D. White, Ray C. Perry, James C. Clark, Robert E. Clark, Charles F. Spencer and Lawrence C. Schumaker.

ORGDP 25 YEARS

J. Howard Junkins, Helen S. Saylor, Andrew J. Thomason and Charles R. Tedder.

20 YEARS

Bobby Beard, Carl L. Johnson, Homer B. Smith, Kenneth O. Hackworth, Paul K. Sherrill, George V. DeBord, D. Walt Brown, Fred L. Speers, Paul E. Melroy, Fred W. Ammons, Kenneth E. Deal, John S. Herron, Robert J. Legan and Billy F. Brummett.

GLAUCOMA EXAMINATION

If you're over 35, be sure to have an eye examination every two years and be sure a glaucoma test is made. This malady results from the buildup of too much fluid pressure in the eyes. If neglected, severe vision defects or blindness result. If caught in time, glaucoma can be arrested, though existing damage can't be repaired.

Y-12 GOLF

The Carl Dorr - Harold Alvey pair continue to dominate the Y-12 Lakeside Golf League, with latest standings reported. Next in competition come Loupe-Hogg and George-Sharp.

Avis and J.D. Collins won the first half of the J Shift League, with Joe Dick and Tom Wheeler as runners-up.

Butler-Patton control the Southwest Point Golf League, far ahead of Schilling-Nunley.

The Cases cling to a substantial lead in the South Hills Golf League, outstripping Graham-McGinnis and Manley-Gipson.

INDOOR RIFLE LEAGUE

A small-bore indoor rifle league will begin Thursday, September 14 at the Oak Ridge Sportsmen's Association indoor range. Firing begins at 6:30 p.m. Also for inexperienced firers the ORSA-sponsored course begins Monday, September 11 at 7 p.m. for six weeks. Details may be obtained from Recreation, extension 3-5833, or from Hickland Harrell, 3-4337.

ORNL 30 YEARS

38781



Trauger

Donald B. Trauger joined the Manhattan District at Columbia University in 1942. He came to Oak Ridge in 1946 and worked on the Gaseous Diffusion Project until 1954. At ORNL since 1954, he was director of the Gas-Cooled Reactor Program and is presently the ORNL associate director for reactor and engineering sciences. A native of Nebraska, he graduated from Nebraska Wesleyan University and did graduate work at Columbia University and The University of Tennessee. He and his wife Elaine live on Delaware Avenue in Oak Ridge.

20 YEARS

Marion B. Hoy, Charles F. Smith, George D. Adams, Raymond D. Arthur, William R. Whitson, Beverly B. Klima, Norman G. Anderson, Norman E. Hinkle, William E. Kinney, Clayton F. Weaver, Lloyd L. Brown, Raymond H. Spoon, Willard E. Johnson, Paul A. Gnad, Julian H. Williams.

25 YEARS

Cecil W. Cartrell, William A. Bell Jr., Wanda Ellis, Temple A. Love, Kendall Ladd, Robert R. Rickard.

Biologists successfully freeze, thaw mouse

(Continued from page 1)

strains with special properties, like high sensitivity to some form of cancer. This would guard against the gradual loss of such sensitivity after breeding through numerous generations.

Preservation of endangered species has also occurred to scientists. Although, presently, implantation must occur in females of the same species, efforts are under way to develop an artificial uterus.

Different tissues require different freezing and thawing rates, so the application of this development in the field of organ preservation for transplantation is still uncertain. Even organs such as kidneys contain enough variation in tissue to make the possibility of freezing and thawing extremely complex, according to Mazur. The complexities arise from the fact that cells are easily destroyed through too rapid or too slow freezing and thawing procedures.

Successful freeze-thawing techniques for living tissue was a goal long sought after by cryobiologists. Now reached, it has become but the beginning of new vistas for scientists.

Effectiveness of Tranquilizers

By T. A. Lincoln, M.D.

A recent article in the Lancet called attention to the occasional adverse effects of tranquilizers in the aged. Old people sometimes become lethargic, confused or disoriented after they have unwittingly taken too many tablets. A few have adverse reactions from correct doses consisting of restlessness, agitation, and paranoid behavior. A much larger problem is the impairment of work efficiency in thousands of American workers caused by use, abuse, and sometimes by proper, but unnecessarily prolonged, use of psychotropic drugs — the tranquilizers, the sedatives, and the antidepressants.



The problem can be illustrated by one of many calls I have received. (The name in the example below is, of course, fictitious.) "Doctor, we will have to do

something about Bob. Since his nervous spell a few months back when his doctor put him on all those tranquilizers, he has been virtually worthless. He is just not 'with it.' He seems to be in a daze most of the time. He doesn't care. His work is sloppy. True, he isn't as nervous as he used to be and he doesn't complain as much, but he just can't 'cut it' anymore."

A much more subtle reaction is a new blandness in personality. No complaint is made for a long time until the loss of "spark" gradually becomes obvious. The person who was subject to emotional outbursts, episodes of anxiety and tension, now becomes bland and indifferent. He is more peaceful, true, but he is also less productive.

Happiness expected

Most people have bursts of activity, often under the stimulus of a deadline or crisis. They have peaks and valleys in their enthusiasm and productivity. Under the influence of tranquilizers, their peaks are lower and their valleys not so deep. This more stable and "tranquil" course does not necessarily mean that the resulting "average" is better. The increased productivity during peaks of enthusiasm, even though accompanied by various nervous systems, may far outweigh the decreases during periods of irritability and depression. In other words, shaving off the peaks may not be beneficial to the individual's career and may not be as necessary as believed either by the patient or his physician.

More and more people, especially women and the young of both sexes, expect to be "happy." To be tense, nervous, anxious or irritable is no longer tolerable. More and more these symptoms call for medication to relieve them. The most common medicine is alcohol, but sufficient use to get relief during the day would quickly label a person an alcoholic. On the other hand, chronic use of tranquilizers is legitimate.

Change resisted

Dr. G.M. Carstairs, psychiatrist at the University of Edinburgh, says that suffering, like pain, is a useful part of human experience. When we have pain, we seek a diagnosis and treatment of the cause.

When we have uncomfortable nervous symptoms, we may need to take stock of a bad social situation or an unrewarding relationship. Insecurity and tension may prompt us to work hard. We may never get enough success to satisfy us but the achievements we make as a result of our distress may be the best treatment.

A change in life style is difficult and too few people are willing to take stock and try to make necessary changes. Often psychiatric help is necessary. Even though a complete change may not be possible, dropping out with tranquilizers doesn't make much sense. One should remember that his symptoms may serve a useful purpose in his total life adjustment.

Pill 'collecting'

Some physicians accede to their patients' demands for relief. About 15 percent to 20 percent of prescriptions now written are for psychotropic drugs. In the New York area, 75 percent of these prescriptions are written by general practitioners and only about one in twenty by psychiatrists. Other specialists, especially orthopedic surgeons, write many prescriptions for tranquilizers.

In the industrial medical department, it is not surprising to have a patient pour out his various pills and find two or three different tranquilizers among them. Patients who shop from doctor to doctor often get a prescription for a tranquilizer from each doctor and do not reveal what his last doctor gave him. Although *pro re nata* - "as is needed" - refillable prescriptions have dropped drastically in number in the past few years, pharmacists report that occasionally patients refill prescriptions more rapidly than they should. Some patients even treat their neighbors and friends with their pills.

Can be helpful

A survey done in 1967 by the Social Research Group of George Washington University and the Family Research Center of the Langley Porter Institute, suggests that about one in four U.S. adults uses one or more kinds of psychotropic drugs. Well over 50 percent report they have used a tranquilizer at some time in the past.

Tranquilizers have clearly enabled some workers with major mental illnesses to avoid total and permanent disability. When used briefly, they are a major help in treating many illnesses and, during times of major stress, can provide useful temporary relief which is not enervating.

Somehow, workers as well as physicians must learn that less than complete relief of symptoms may be a necessary compromise in order to maintain work effectiveness.

Now in Who's Who

Several ORNL staff members have been listed for the first time in Who's Who in America.

New listings include Robert D. Birkhoff, G. Davis O'Kelley, Milton H. Lietzke and Herbert G. Duggan. Former Mathematics Division Director Alston S. Householder also is listed. Additions include several ORNL consultants.

DIVISION Retirees

6-19377

6-14378



Mrs. Allen



Clary



Burkett



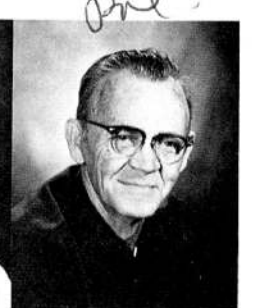
Chamblee

John F. Chamblee, a native of Weir, Miss., lives at 122 North Jefferson Circle, Oak Ridge. He came here August 20, 1951. Chamblee was injured last month in an automobile accident and has been off from work since then.

Robert H. Clary, born in Cottage Grove, Tenn., came with Union Carbide February 2, 1944. He lives at 4408 Tazewell Pike, Knoxville, with his wife, the former Darlene Hicks. They have two daughters and a son.



Draper



Dunaway

The Paducah Plant bids adieu this month to three old-timers who are retiring. They are J.W. (Bill) Draper, Maintenance Division; Howard Dunaway, Electrical Department; and Marjorie Stiles, Medical.

Bill Draper, a native of Carlisle County, Ky., has worked in maintenance since 1953. He lives in Ballard County. He and his wife, Anna, have three children and eight grandchildren.

Electrician Howard Dunaway ends nearly 20 years company service. He and his wife, Frances, are both natives of Alabama. They have three children and four grandchildren. Dunaway says he has



Miss Stiles

not definite plans but has several things in mind to keep him active.

Marjorie Stiles, well known nurse at the Paducah Plant, ends more than 18 years company service. She resides at Kevil, Ky., and recently enjoyed a retirement party given by fellow employees, those she had "needled" through the years.



Y-12 PLANT

RIDERS from Bearden section, via Middlebrook Pike, to any portal, straight day. A. T. Brown, plant phone 3-7887, home phone Knoxville 584-1273.

TWO RIDERS from Washington Pike, Valley View, Smithwood, Inskip Rd. sections, Knoxville, via Clinton Highway, to East, North or Central Portal, straight day. W.L. McCormick, plant phone 3-5732, home phone Knoxville 522-5207.

RIDE from Rutledge Pike area, Knoxville, to West Portal, straight day. Jean A. Norris, plant phone 3-5359, home phone Knoxville 947-8733.

ONE or TWO car pool members from Pennsylvania, New York, Utah Avenue section, Oak Ridge, to North Portal, straight day. R.T. Cantrell, plant phone 3-7382, home phone Oak Ridge 483-1700.

ORGDP

RIDE or will join car pool from Maryville to Portal 4 or 6, 8-4:30 shift. Ed Crowe, plant phone 3-3396, home phone Maryville 984-0064.



Stout



Walker

Two long-time ORNL employees will retire at the end of August. Elbert D. Stout ends over 28 years of service, and John B. Walker has 27 years service.

Stout is a carpenter in Plant and Equipment Division. He lives on Route 2, Oliver Springs. Walker is a chemical operator "A" in Isotopes Division. He lives on Route 17 in Knoxville.

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CALENDAR of EVENTS

TECHNICAL August 25

Mathematics Division Statistics Seminar: C.P. Quesenberry, North Carolina State University. Conference Room, Building 9704-1, Y-12, 2 p.m.

Physics Division Seminar: "Status of the Super-Conducting Linear Accelerator at Karlsruhe," C.M. Jones. East Auditorium, Building 4500N, 3 p.m.

August 28-31

Twelfth AEC Air Cleaning Conference: Oak Ridge Playhouse.

August 30

Metals and Ceramics Division Seminar: "Presentation and Extrapolation of High Temperature Mechanical Properties," R.M. Goldhoff, General Electric Corporation. Conference Room Z-62, Building 4500S, 9 a.m.

August 31

Solid State Division Seminar: "Study of Magnetic Flux Lines in Superconductors by Neutron Small Angle Scattering," H. Ullmaier, Institut für Festkörperforschung der K.F.A., Jülich, Germany. Conference Room, Building 3025, 10 a.m.

September 6

Metals and Ceramics Division Seminar: (Title to be announced) B.S. Borie. East Auditorium, Building 4500N, 2:45 p.m.

September 4 holiday

Monday, September 4 is an official holiday for employees in the four Nuclear Division plants. Labor Day is observed as the nation's oldest national holiday. Technically, there are no national holidays. The President and Congress can declare holidays only for the District of Columbia and federal employees.

No employee will be required to be at work unless his presence is required for security reasons or for continuous operations.

September 6-7

Chemistry Division Information Meeting: Central Auditorium, Building 4500N, 9 a.m.

September 7

Gas-Cooled Reactor and Thorium Utilization Programs Information Meeting: East Auditorium, Building 4500N, 9 a.m.

COMMUNITY August 25-26

Oak Ridge Playhouse. "The Fanta-sticks," rollicking comedy. Tickets available at the Box office.

WHITE CANE SALE: Tennessee-wide drive by the Lions Club. Papers on sale throughout the area.

September 5,6

Try-outs for Shakespeare's rowdy "Midsummer Night's Dream" will be held at the Oak Ridge Playhouse, 7:30 p.m. Needed: 20-30 characters from 15 up . . . both white and black. No previous acting experience required. Come enjoy a laugh or two on the Bard.

4268



NEWSMEN FROM PADUCAH — 16 of the new division and departmental reporters for the Nuclear Division News recently met with Paducah editor Chris Cawood, standing at right. The group will work to increase the amount of news from Kentucky in the plant newspaper. Several other appointed reporters could not be present for the picture-making.

'A Woman's Word'

(Editor's Note: It is proposed that "A Woman's Word" be a regular feature in the Nuclear Division News. Comments are invited, as well as contributions. Full credit will, of course, be given the author.)

The subject: "Who does what in households where both husband and wife hold outside jobs?" has been getting an economy-sized scrutiny in recent years by a number of groups ranging from the academic to private sectors.

A recent study in Syracuse, N.Y., conducted by the Institute of Life Insurance, suggests that household roles of men and women have changed less than has been recently supposed. The researchers found that while some husbands share marketing chores and child-care, most still concentrate on such traditionally masculine tasks as house repairs and work in the yard.

The Syracuse study also discovered that husbands averaged 1.6 hours a day on household tasks, regardless of whether or not their wives had jobs.

This adherence to tradition is by no means unanimously appreciated in all households. According to a recent Harris survey, almost half of working women polled felt that men should do more around the house. More than one-third opined that they should get more help with children, cleaning and shopping, and about one-fourth also wanted more help with the dishes.

Thinking is changing

An even stronger indication that the status quo may be in for shaking-out is suggested by a brand new study of young people between the ages of 14 and 25, sponsored by the Institute of Life Insurance. In contrast with a similar study two years ago, in which three out of five young people polled agreed that "a woman's place is in the home," a higher proportion of women currently disagree with that definition. According to the findings of this survey, about 42 percent of the young women polled in 1970 favored the housewife's role while in 1972 only 35 percent did so.

Many wives have jobs too

While the age-old controversy of dividing the chores rages on, there is no doubt that in some homes the amount of help wives get is a factor in their decision to get a job. For some of 20.6 million married women who work outside the home, the rewards of a salary, coupled with the "fringe benefits" of health and life insurance to augment their family's protection, compensate for the dimin-

ished time they must spend on household chores.

The subject of who does what has elicited not only research, but has also inspired a number of recent marriage contracts which delve into the matter of household-task-sharing, some in minute detail.

However, as any working wife knows, you don't have to belong to Women's Lib to understand the reasoning behind some of the fine print. In fact, even pre-Women's Lib women, from suffragette Lucy Stone to writer Virginia Woolf, drafted life-style agreements with their spouses.

The housewives' lament

The reasons that inspired Ms. Stone and Ms. Woolf to take quill in hand could have had something to do with a verse popular in their day. Entitled, "The Housewife's Epitaph," it went:

"Here lies a poor woman who always was tired,

She lived in a house where help was not hired,

Her last words on earth were 'Dear friend, I am going

Where washing ain't done, nor sweeping nor sewing

But everything there is exact to my wishes

For where they don't eat, there's no washing of dishes."

Air cleaning conference planned for late August

The 12th AEC Air Cleaning Conference will be held in Oak Ridge on August 28-31 under the joint sponsorship of the U.S. Atomic Energy Commission Division of Operational Safety, the Harvard Air Cleaning Laboratory (Harvard University School of Public Health), and the Oak Ridge National Laboratory.

The AEC Air Cleaning Conferences are held approximately every other year to report and disseminate information concerning research, development, design, and experience in nuclear air and gas cleaning. These conferences are essentially an outgrowth of the old "stack cleaning conferences," the first of which was held at Harvard University in 1951. Subsequent meetings have been held at Brookhaven, Argonne, Hanford, Los Alamos, Oak Ridge (1963) and the United Nations in New York (joint conference with IAEA on treatment of airborne radioactive waste).

Rides, Car Pools

Y-12 PLANT

RIDE from Saga Lane, off Guinn Road, Solway, to West Portal, straight day. Myra Henshaw, plant phone 3-5831, home phone Oak Ridge 483-9427.

RIDE from Halls area, to North Portal, J Shift. Douglas Underwood, home phone Halls 922-6010.

RIDER from North Knoxville section to East, North or Central Portal, straight day. J.F. Baker, plant phone 3-5935, home phone Knoxville 523-4542.